Wood texture detection with conjugate gradient neural network algorithm

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ABSTRACT

This project explored fundamental methods to find the factors that can be used in classifying and detecting the type of wood. Whereas, the literatures have been reviewed to determine the algorithms developed. Some experiments have been conducted to analyze the model and system. The experiments are based on artificial neural network (ANN) algorithm that used back propagation and conjugate gradient method of training function in the process of identification. The experiments carried out to be more accurate than the ANN system, the result is about 96% accuracy. It is expected the method can be used and applied for the detection of the type and classification of wood in the industrial sector, especially agriculture.

KEYWORDS:

Neural Networks; Back propagation; Edge Detection; Image Processing; Texture Detection.